

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/913,518 11/04/97 DEBALME

J 1247-709-3VF

IM22/1127

OBLON SPIVAK MCCLELLAND MAIER & NEUSTADT  
CRYSTAL SQUARE FIVE  
1755 JEFFERSON DAVIS HIGHWAY  
FOURTH FLOOR  
ARLINGTON VA 22202

EXAMINER

AFTERGUT, J

ART UNIT	PAPER NUMBER
1733	22

DATE MAILED:

11/27/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

<b>Office Action Summary</b>	Application No.	Applicant(s)
	08/913,518	DEBALME ET AL.
	Examiner	Art Unit
	Jeff H. Aftergut	1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on \_\_\_\_.

2a) This action is **FINAL**.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1 and 5-14 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_ is/are allowed.

6) Claim(s) 1 and 5-14 is/are rejected.

7) Claim(s) \_\_\_\_ is/are objected to.

8) Claims \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_ is/are objected to by the Examiner.

11) The proposed drawing correction filed on \_\_\_\_ is: a) approved b) disapproved.

12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. § 119

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

#### Attachment(s)

15) Notice of References Cited (PTO-892)

16) Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_

18) Interview Summary (PTO-413) Paper No(s). \_\_\_\_

19) Notice of Informal Patent Application (PTO-152)

20) Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1, 5-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Francis in view of O'Connor optionally further taken with PCT WO 90/14457 for the same reasons as presented in paper no. 19 paragraph 2.

***Response to Arguments***

3. Applicant's arguments filed 10-23-00 have been fully considered but they are not persuasive.

The applicant has added to each of the claims that the glass filaments deposited in the process in total comprise more than 40% by weight of the total of glass filaments and thermoplastic filaments deposited. The applicant argues that this high amount of glass fiber (greater than 40% by weight) resulted in a superior composite article of greater strength and that the prior art of record failed to teach the use of greater than 40% by weight of the glass filaments in the composite products produced by their operations. The applicant refers to various portions of the specification and suggested that the prior art was limited in the amount of glass fibers which were in the final product to be about 50%. The applicant noted that the amount of glass fiber in the finished product clearly was not a result effective variable because it was not known how adjusting the amount of glass would have impacted the finished article. The applicant also argues that there was no reason to look to the reference to O'Connor and that there must be some

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reason to make the combination in order to have a *prima facie* case. These arguments are respectfully traversed.

To begin with, the applicant is advised that the reference to Francis express suggested that the amount of plastic fiber (the potentially adhesive melted fibers which were used to bond the assembled composite together) used in the operation be between 5-45%. This means that the composite of Francis would have had 55-95% glass therein. Clearly this was greater than 40% by weight glass. The applicant is referred to column 11, lines 8-16. It should additionally be noted that the preferred amount of potentially adhesive plastic fibers was 5-20% and therefore the preferred amount of glass fibers was 80-95%. The reference does go on to state that the use of large amounts of plastic fibers (45% plastic fibers and 55% glass fibers) would have resulted in a stronger product than those which employed a low percentage of plastic fibers (5%). Clearly, even when one desired to utilize a high percentage of thermoplastic fibers in the composite in Francis one would have employed at least 55% glass fibers therein. It is noted that the reference to Francis failed to teach that the commingled fibers would have been used in both the fabric and the nonwoven mat formed upon the same.

However, as expressed in paper no. 19, O'Connor expressly suggested that the use of commingled fibers within a nonwoven as well as fabrics would have ensured intimate contact between the thermoplastic fibers which formed the matrix as well as a more even distribution of the thermoplastic fibers which formed the matrix in the composite article. It certainly would have been within the purview of the ordinary artisan to employ commingled fibers within both the fabric as well as within the nonwoven mats formed in Francis in order to ensure that the thermoplastic fibers were uniformly and intimately mixed with the reinforcing fibers as

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suggested by O'Connor. The reference to Francis was clearly concerned with the formation of a composite felt and the thickness (compaction) of the same was clearly controlled to produce various density products (in other words had one desired to produce a dense composite product greater pressure would have been applied). It certainly would have been within the purview of the ordinary artisan to control the amount of thermoplastic within the composite (as well as glass fibers therein) in order to attain the desired effects for strength and thickness. It should also be noted that O'Connor suggested that the reinforcement would have made up 40-80% by weight of the total weight of the composite fabrics (whether woven or nonwoven) with the commingled fibers, see column 3, line 64-column 4, lines 3. The ordinary artisan would again have understood that the amount of reinforcement in the finished product would have been 40% or more. Certainly, in order to increase the uniformity and to attain superior contact between the thermoplastic fiber and the reinforcing fiber, it would have been within the purview of the ordinary artisan to utilize commingled fibers of thermoplastic and reinforcing fibers for both the fabrics and nonwoven materials utilized therein as suggested by O'Connor in the operation of Francis. The applicant did not address whether it was conventional in the art to cut the finished product or roll up the finished product for use later as asserted by the Office in the action. Because applicant did not traverse the same, it is believed that applicant agrees with the Office interpretation of the same.

Regarding PCT '457 was cited to show that one knew subsequent to formation of a composite on a conveyor one skilled in the art would have either cut or rolled up the composite material. The reference to PCT '457 suggested the cutting of the composite material after compaction in the double band press. Note that Francis fed the composite material through a

double band press. As established in paper no. 19, the feeding of the material to a cutter or to a roll for roll up was taken as conventional in the art. The reference to PCT '457 further evidenced the same.

*Conclusion*

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff H. Aftergut whose telephone number is 703-308-2069. The examiner can normally be reached on Monday-Friday 6:30-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael W. Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3599 for regular communications and 703-305-7718 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

*Jeff H. Aftergut*  
Jeff H. Aftergut  
Primary Examiner  
Art Unit 1733

JHA  
November 24, 2000